



Source Water Assessment Program (SWAP) Report For ATLANTIC MICROWAVE CORPORATION (Draft)

What is SWAP?

The Source Water Assessment Program (SWAP), established under the federal Safe Drinking Water Act, requires every state to:

- ? Inventory land uses within the recharge areas of all public water supply sources;
- ? Assess the susceptibility of drinking water sources to contamination from these land uses; and
- ? Publicize the results to provide support for improved protection.

SWAP and Water Quality

Susceptibility of a drinking water source does *not* imply poor water quality. Actual water quality is best reflected by the results of regular water tests.

Water suppliers protect drinking water by monitoring for more than 100 chemicals, treating water supplies, and using source protection measures to ensure that safe water is delivered to the tap.

Prepared by the
Massachusetts Department of
Environmental Protection,
Bureau of Resource Protection,
Drinking Water Program

Date DRAFT Prepared:
January 26, 2001

Table 1: Public Water System (PWS) Information

<i>PWS NAME</i>	Atlantic Microwave Corporation
<i>PWS Address</i>	58 Main Street (Route 117)
<i>City/Town</i>	Bolton
<i>PWS ID Number</i>	2034018
<i>Local Contact</i>	George Fournier
<i>Phone Number</i>	(978) 779-6963

<i>Well Name</i>	<i>Source ID#</i>	<i>Zone I (in feet)</i>	<i>IWPA (in feet)</i>	<i>Source Susceptibility</i>
WELL #1	2034018	100	421	High

Introduction

We are all concerned about the quality of the water we drink. Drinking water wells may be threatened by many potential sources of contamination, including septic systems, road maintenance, and improper disposal of hazardous materials. Citizens and local officials can work together to better protect these drinking water sources.

Purpose of this report:

This report is a planning tool to support local and state efforts to improve water supply protection. By identifying land uses within water supply protection areas that may be potential sources of contamination, the assessment helps focus protection efforts on appropriate best management practices (BMPs) and drinking water source protection measures. Department of Environmental Protection (DEP) staff are available to provide information about funding and other resources that may be available to your community.

This report includes:

1. Description of the Water System
2. Discussion of Land Uses within Protection Areas
3. Recommendations for Protection
4. Attached Map of the Protection Areas

1. Description of the Water System

The Atlantic Microwave Corporation's 135 feet deep bedrock well is located southwest of the former machine shop building. The well has a Zone I of 100 feet and an Interim Wellhead Protection Area (IWPA) of 421 feet. The well is located in an aquifer with a high vulnerability to contamination due to the absence of hydrogeologic barriers that can prevent contaminant migration. Please refer to the attached map of the Zone I and IWPA. The well has no treatment at this time. For current information on monitoring results and treatment, please contact the Public Water System contact person listed above in Table 1.

What is a Protection Area?

A well's water supply protection area is the land around the well where protection activities should be focused. Each well has a Zone I protective radius and an Interim Wellhead Protection Area (IWPA).

- **The Zone I** is the area that should be owned or controlled by the water supplier and limited to water supply activities.
- **The IWPA** is the larger area that is likely to contribute water to the well.

In many instances the IWPA does not include the entire land area that could contribute water to the well. Therefore, the well may be susceptible to contamination from activities outside of the IWPA that are not identified in this report.

What is Susceptibility?

Susceptibility is a measure of a well's potential to become contaminated due to land uses and activities within the Zone I and Interim Wellhead Protection Area (IWPA).

2. Discussion of Land Uses in the Protection Areas

There are a number of land uses and activities within the drinking water supply protection areas that are potential sources of contamination.

Key issues include:

1. **Inappropriate activities in Zone I;**
2. **Aboveground Storage Tank ~~within Zone I and IWPA;~~**
3. **Landscaping and lawn care ~~within the IWPA;~~**
4. **Hazardous material storage ~~within the IWPA;~~**
5. **Hazardous waste recycling ~~within the IWPA;~~**
6. **Septic system ~~within the IWPA;~~**
7. **Machine/metal working shop ~~within the IWPA;~~**
8. **Transportation corridor ~~within the IWPA;~~**
9. **Retention basin ~~within the IWPA;~~ and**
10. **Very small quantity hazardous waste generator ~~within the IWPA.~~**

The overall ranking of susceptibility to contamination for the well is High, based on the presence of at least one high threat land use or activity within the Zone I and or IWPA.

1. **Zone I-** Currently, the well does not meet DEP's restrictions for Zone Is. The Zone contains the former machine shop building with an aboveground storage tank, and parking spaces. Please note that systems not meeting DEP Zone I requirements must get DEP approval and address Zone I issues prior to increasing water use or modifying systems.
2. **Aboveground storage tank (AST) with heating oil -** The AST is located within the Zone I and IWPA. Although the floor is cemented, there is no secondary containment. AST in the protection area should be located on an impervious surface, and contained in an area 110 % of the AST's capacity. Any modification to the AST must be consistent with Massachusetts' plumbing, building, and fire code requirements. The Department recommends that Atlantic Microwave consult with the local fire Department for any additional local code requirements regarding AST.
3. **Landscaping and lawn care -** Of concern with this land use activity is the use of

Table 2: Table of Activities within the Water Supply Protection Areas

Facility Type	Potential Contaminant Sources	Zone I	IWPA	Threat	Comments
Factory	Parking spaces, building and road	Yes	Yes	Moderate	Limit road salt usage and provide drainage away from wells
	Fuel Storage Above Ground	Yes	Yes	Moderate	Located in former machine shop, on cemented floor.
	Hazardous material storage	No	Yes	High	Thinners and lubricants
	Hazardous waste recycling	No	Yes	High	Cutting fluid is recycled
	Landscaping and lawn care	No	Yes	Moderate	Fertilizer and pesticide use
	Septic System	No	Yes	Moderate	See septic systems brochure
	Machine/metal working shop	No	Yes	High	Use of solvents
	Very small quantity hazardous waste generator	No	Yes	Low	See VSQG Brochure in the appendix

* -For more information on Contaminants of Concern associated with individual facility types and land uses please see the SWAP Draft Land Use / Associated Contaminants Matrix on DEP's website - www.state.ma.us/den/brp/dws/.

Glossary

Zone I: The area closest to a well; a 100 to 400 foot radius proportional to the well's pumping rate. To determine your Zone I radius, refer to the attached map.

IWPA: A 400 foot to ½ mile radius around a public water supply well proportional to its pumping rate; the area DEP recommends for protection in the absence of a defined Zone I I. To determine IWPA radius, refer to the attached map.

Zone II: The primary recharge area defined by a hydrogeologic study.

Aquifer: An underground water-bearing layer of permeable material that will yield water in a usable quantity to a well.

Hydrogeologic Barrier: An underground layer of impermeable material that resists penetration by water.

Recharge Area: The surface area that contributes water to a well.

fertilizers and pesticides which can leach into groundwater and potentially contaminate the water supply.

4. **Hazardous material storage/ Machine/metal working shop** - Chemicals such as lubricants, thinner and cutting and grinding fluid used in Atlantic Microwaves' daily activity as a machine shop are stored on-site. In case of a release of any of these chemicals, the water supply could potentially be contaminated.
5. **Hazardous waste recycling** - The waste cutting fluid is recycled back into the machine.
6. **Transportation corridor** - Route 117 (Main Street) is located within the IWPA. Route 117 is one of the main roads through the town, which increases the chances of contamination from accidents or spills and road salt.

Recommendation

Contact your local fire department to ensure that the IWPA is included in emergency response planning.

Regarding salt use, work with your local highway supervisor to encourage reducing road salt use in your IWPA.

Implementing the following recommendations will reduce the system's susceptibility to contamination.

3. Protection Recommendations

Atlantic Microwave Corp. should review and adopt the following recommendations:

Zone I:

- 3 Remove all non-water supply activities from Zone I, to comply with DEP's Zone I requirements. Please note that water systems not meeting DEP Zone I requirements must get DEP approval and address Zone I issues prior to increasing water use or modifying system.
- 3 Do not use or store pesticides, fertilizers or road salt within Zone I.

Training and Education:

Train staff on proper hazardous material disposal, emergency response, and best management practices; include custodial staff, grounds keepers, and certified operator

Facilities Management:

- 3 Implement standard operating procedures regarding proper storage, use and disposal of hazardous materials. To learn more, see the hazardous materials guidance manual at www.state.ma.us/dep/brp/dws/dwspubs.html.
- 3 Implement Best Management Practices (BMPs) for the use of fertilizer on Atlantic Microwave property.
- 3 Upgrade all oil/hazardous material storage tanks to incorporate proper containment and safety practices.

Planning:

- 3 Work with local officials in Bolton to include Atlantic Microwave Corporations' IWPA in Aquifer Protection District Bylaws and other regulations and to assist you in

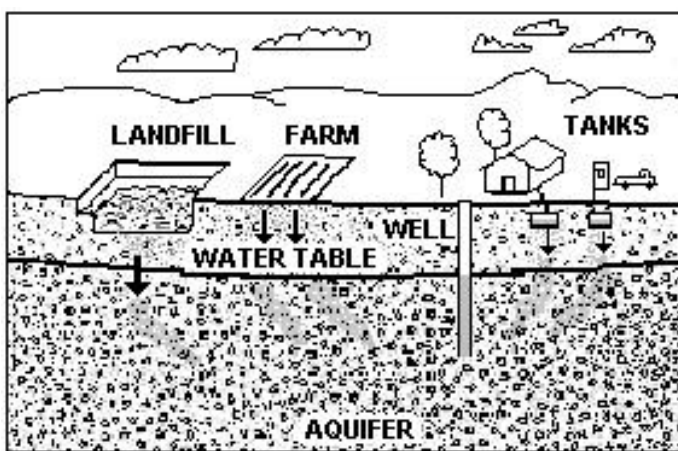


Figure 1: Example of how a well could become contaminated by different land uses and activities.

For More Information:

Contact **Josephine Yemoh-Ndi** in DEP's **Worcester Office** at **(508) 792-7650 x 5030** for more information and for assistance in improving current protection measures.

More information relating to drinking water and source protection is available on the Drinking Water Program web site at:

www.state.ma.us/dep/brp/dws/

Additional Documents:

To help with source protection efforts, more information is available by request or online at www.state.ma.us/dep/brp/dws/, including:

1. Water Supply Protection Guidance Materials such as model regulations, Best Management Practice information, and general water supply protection information.
2. MA DEP SWAP Strategy
3. Land Use Pollution Potential Matrix
4. Draft Land/Associated Contaminants Matrix

Copies of this assessment have been provided to the public water supplier, town boards, the town library and the local media.

improving protection.

- 3 Supplement the SWAP assessment with additional local information and incorporate it into water supply educational efforts. Use a potential contaminant threat inventory to assist in setting priorities, focusing inspection, and creating educational activities.

These recommendations are only part of your ongoing local drinking water source protection. Citizens and community officials should use this SWAP report to spur discussion of local drinking water protection measures.

4. Attachments

- **Recommended Source Protection Measures Factsheet**
- **Your Septic System Brochure**
- **Map of Public Water Supply (PWS) Protection Area**
- **Pesticide Use Factsheet**
- **Fertilizer Use Factsheet**

